

Claims

1. A toilet seat comprising:
 - an annular seat member having an internal duct extending around the central opening in the annular seat member from an inlet formed in the annular seat member for receiving foul air from a toilet pan to an outlet formed in the seat member;
 - at least one filter for arrangement in the duct for deodorising foul air from the toilet pan; and
 - fan means arranged in the duct for creating air flow along the duct through the air filter,

wherein the filter is fixed to a cartridge which is removably insertable into the annular seat member through an aperture formed in the outer circumferential side of the annular seat member, and the outlet of the duct is formed in an outer wall of the cartridge which fits in the aperture on insertion of the cartridge into the annular seat member.
2. A toilet seat according to claim 1, wherein the cartridge includes a rigid housing extending around the filter.
- 20 3. A toilet seat according to claim 1, wherein the filter is arranged to cover the outlet, and the duct provides a gap adjacent the filter for air to flow into the filter extending along the length of the filter around the central opening in the annular seat member.
- 25 4. A toilet seat according to claim 3, wherein said gap is present on all sides of the filter other than the side of the filter which covers the outlet.
5. A toilet seat according to claim 3 or 4, wherein the filter is disposed directly against the wall of the annular seat member in which the outlet is formed.

6. A toilet seat according to any one of claims 3 to 5, wherein the cartridge includes further walls extending from said outer wall around the filter, said gap being provided outside the further walls, the further walls having openings to allow the flow of foul air from the gap to the filter.

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7. A toilet seat according to any one of the preceding claims, wherein said toilet seat includes means for biasing the cartridge out of the annular seat member and a releasable catch for retaining the cartridge in the annular seat member.

10 8. A toilet seat according to claim 7, wherein the releasable catch comprises at least one tab provided on the cartridge and engageable in a corresponding aperture extending through the lower surface of the annular seat member so as to be releasable by pressing the at least one tab.

15 9. A toilet seat comprising:

an annular seat member having an internal duct extending around the central opening in the annular seat member from an inlet formed in the annular seat member for receiving foul air from a toilet pan to an outlet formed in the seat member;

at least one filter for deodorising foul air from the toilet pan arranged in the duct; and

fan means arranged in the duct for creating air flow along the duct through the air filter,

wherein the filter is arranged to cover the outlet, and the duct provides a gap adjacent the filter for air to flow into the filter extending along the length of the filter around the central opening in the annular seat member.

25 10. A toilet seat according to claim 9, wherein the outlet of the duct is arranged in the outer circumferential side of the annular seat member.

30 11. A toilet seat according to claim 9 or 10, wherein the filter is fixed to a

cartridge which is removably insertable through an aperture formed in the annular seat member.

12. A toilet seat according to claim 11, wherein the cartridge has walls extending 5 around the filter inside the duct, said gap being formed outside the walls of the cartridge, the walls having openings to allow the flow of foul air from the gap to the filter.

13. A toilet seat according to any one of claims 9 to 12, wherein the filter is 10 disposed directly against the outlet.

14. A toilet seat comprising:
an annular seat member pivotally attached at a rearward position around the central opening in the annular seat member to fittings for fixing the annular seat 15 member to a toilet pan, the annular seat member having an internal duct extending from an inlet formed in the annular seat member for receiving foul air from the toilet pan to an outlet formed in the seat member;
at least one filter for deodorising foul air from the toilet pan arranged in the duct;
fan means arranged in the duct for creating air flow along the duct through the air filter; and
at least one battery for providing power to the fan means,
wherein the battery is disposed inside the annular seat member at a position forward of the duct containing the fan means and the at least one filter.

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15. A toilet seat according to claim 14, wherein the internal duct extends around the central opening in the annular seat member.

16. A toilet seat according to claim 15, wherein the inlet of the duct is disposed at 30 a rearward position around the opening adjacent the fittings.

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17. A toilet seat according to claim 16, wherein the duct forms two flow paths each extending from said inlet to a respective outlet in opposite directions around the opening, a filter being arranged in each flow path in parallel.

5 18. A toilet seat comprising

an annular seat member having an internal duct forming at least two flow paths each extending in parallel along a different portion of the annular seat member around the central opening in the annular seat member from an inlet formed in the annular seat member for receiving foul air from a toilet pan to an outlet formed in the

10 seat member,

the annular seat member having arranged in each flow path formed by said said duct:

at least one filter for deodorising foul air from the toilet pan; and

a fan unit having a fan inlet and a fan outlet at opposite ends thereof for

15 creating air flow along the duct through the air filter, the fan unit being arranged with the fan inlet and fan outlet aligned in a direction around the central opening in the annular seat member.

19. A toilet seat according to claim 18, wherein the annular seat member is
20 attached by a hinge to a fitting for fixing the annular seat member to a toilet pan, and the internal duct forms two flow paths each extending from a said inlet disposed at a position around the opening adjacent the hinge in opposite directions to a said outlet.

20. A toilet seat according to claim 19, wherein the said inlet of each flow path is
25 an inlet common to each flow path.

21. A toilet seat according to any one of the preceding claims, wherein the outlet comprises an array of separate holes.

30 22. A toilet seat according to any one of the preceding claims, wherein the inlet

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comprises an array of separate holes.

23. A toilet seat according to any one of the preceding claims, wherein the filter comprises activated carbon.

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24. A toilet seat according to claim 23, wherein the porous support is surrounded by a gas-permeable, fluid-impermeable membrane.